

## LOWER FLUENCE BOUNDARY OBLIQUE LASER SHOCK PEENING

## ABSTRACT

5 A laser shock peening method including laser  
shock peening a first area with at least one high  
fluence normal laser beam and laser shock peening a  
border area between the first area and a non-laser  
shock peened area of the article with at least one  
first low fluence oblique laser beam. The border  
area may be laser shock peened with two or more low  
10 fluence oblique laser beams. The second low fluence  
oblique laser beam and others have a lower fluence  
than the first low fluence oblique laser beam. The  
border area may be laser shock peened with progres-  
sively lower fluence oblique laser beams starting  
15 with the one first fluence oblique laser beam wherein  
the progressively lower fluence oblique laser beams  
are in order of greatest fluence to least fluence in  
a direction outwardly from the first area through the  
border area to the non-laser shock peened area.